



US006487657B1

(12) **United States Patent**
Brockmann

(10) **Patent No.:** **US 6,487,657 B1**
(45) **Date of Patent:** **Nov. 26, 2002**

(54) **DATA COMMUNICATION NETWORK**

(75) **Inventor:** **Ronald Alexander Brockmann,**
Utrecht (NL)

(73) **Assignee:** **No Wires Needed, B.V.,** Bitthoven
(NL)

(*) **Notice:** Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 0 days.

(21) **Appl. No.:** **09/252,308**

(22) **Filed:** **Feb. 18, 1999**

(30) **Foreign Application Priority Data**

Feb. 19, 1998 (NL) 1008351

(51) **Int. Cl.⁷** **H04L 9/36; H04L 9/32;**
H04K 1/10; H04H 1/12

(52) **U.S. Cl.** **713/154; 713/155; 713/201;**
380/33; 380/270; 380/271; 455/3.05

(58) **Field of Search** **380/33, 270, 271,**
380/277, 279; 713/154, 155, 163, 201;
455/3.01, 3.02, 3.05, 3.06

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,199,072 A 3/1993 White et al. 380/44

5,309,516 A 5/1994 Takaragi et al. 380/45
5,539,824 A * 7/1996 Bjorklind et al. 380/21
5,668,880 A * 9/1997 Alajajian 380/49

FOREIGN PATENT DOCUMENTS

EP WO 95/12942 A1 5/1995 H04L/12/44
EP WO 96/04734 A1 2/1996 H04L/12/28

* cited by examiner

Primary Examiner—Justin T. Darrow

(74) *Attorney, Agent, or Firm*—St. Onge Steward Johnston
& Reens LLC

(57) **ABSTRACT**

The invention relates to a data communication network
suitable for the exchange of data between computers, which
network comprises at least one substantially wireless LAN
(Local Area Network) and access points distributed over an
area of coverage for linking the computers comprised in the
minimally one LAN, with the network. The minimally one
wireless LAN is virtual and the data traffic with the com-
puters belonging to that particular LAN is individualized by
encoding the data exchanged between the computers and the
access points by using for each LAN a unique key.

7 Claims, 1 Drawing Sheet

